1: Conzemius M-4, 5 (1921) 1932
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flowers (*Passiflora* sp.; M.: *drap, tutbuñ;* S.: *wahluluñ, suñsuñ, wahamtari*).

ENSILAGE.—A sort of ensilage is occasionally made by the Miskito of various foodstuffs, as green bananas or plantains and pejivalles, and by the Sumu of boiled maize. Such food is known by the name *bisbaya;* it may be kept for six months, or even longer.

Green bananas or plantains are peeled and buried in the ground upon a layer of large bijagua leaves and then covered up with another layer of leaves and earth. The Indians claim that no worm will get into the food when the work has been done carefully. The whole is not uncovered until required for food. The fruit retains its natural whitish color, but will turn black immediately upon exposure to the air. *Bisbaya* is consumed either in the shape of a beverage, after being boiled with water, or it is baked between leaves into a sort of bread (M.: *bisbaya tanka;* S.: *bisbaya pañni*). [88]

The fruit of the pejivalle palm, which has been stored in this manner, is always taken in the shape of a drink. It is boiled again, when taken out of the soil, mashed, strained, and mixed with wabul.

The Sumu rarely make use of this manner of preserving food, except for maize. The latter is steeped in lye of wood ashes to remove the outer skin, and then buried for a few months. After being taken out of the ground it is preserved in baskets over the smoke until needed as food. These various kinds of *bisbaya* all have a very offensive odor, which may be smelled from a great distance.

Another manner of ensiling is practiced more frequently by the Sumu. Maize or bananas from which the skin has been removed are placed in running water until they partially ferment, and are then dried in the sun. For this purpose they are made into large leaf parcels and deposited in the neighboring creek. This sort of food (M. and S.: *kwakwa, tahra, tulis*) has also a somewhat disagreeable odor.

FOOD ADJUNCTS: NARCOTICS, STIMULANTS, EXCITANTS, ETC.

TOBACCO (*Nicotiana tabacum* L.).—The sukya uses tobacco as a narcotic in order to throw himself into a condition of wild ecstasy; during such an abnormal conditon he is supposed to enter into relations with the spirits. He also blows tobacco smoke over the sick persons in order to purify them.

[88] Bell (b: 27) states that the Creoles of Bluefields made plantains into "foofoo," that is, cut up, put into large baskets, and buried in the earth until partially rotten, then dried in the sun and made into flour. The name "foofoo," corrupted by the Miskito into *pupu*, is now applied to green bananas or plantains which have been cooked, mashed, and formed into the shape of tamales.

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The eating of earth (M.: *tasba;* S.: *sdū*), clay (M.: *sldūbla;* S.: *sdū*), sand (M.: *dūya;* S.: *kdūhmak*), and charcoal (M.: *kwasko, tmasko;* S.: *kusmak*) is very common among women and children. 261

NONFERMENTED BEVERAGES

DRINKING WATER.—The whole country is well watered and the Indians obtain their drinking water from the running streams on the banks of which their settlements are generally situated. Wells are also dug by those living near the sea. 312

WATER LIANAS.—Several varieties of water lianas, varying in size from 3 to 5 inches, can be found throughout the forest. When the stem is merely cut through only a few drops of water will issue; the vine must then be severed immediately about 2 or 3 feet farther down, whereupon a continual stream of water will flow, quite sufficient to quench the thirst of a person. The Indian holds the severed part of the stem in a vertical position, allowing the sap to run directly into the mouth. The vine must be cut above first, otherwise the sap will ascend so rapidly that hardly any will be obtained.

HONEY.—The Indians are very fond of the honey (M.: *nasma;* S.: *amak*) from the various species of wild, stingless bees which make their nests in hollow trees. The entrance to the nest is easily ascertained by watching the little bees flying about. The Indians either climb or fell the tree in order to get possession of the honey. The latter is always taken as a beverage, after being mixed with water, but even in its natural state it is not viscid, but almost as fluid as water. It has a subacid, highly fragrant taste. The Indians, while away from home, may make a meal of the contents of such a bee nest, but the average foreigner does not care much for it, and finds it greatly inferior to that of the European domesticated bee. The natives collect in bamboo joints what they are unable to consume immediately to take home to their family. 222

MILK.—The consumption of cow's milk is not general. When I inquired the reason from some Sumu of the upper Rio Waspuk they answered that they are not the descendants of cows, to drink their milk. 272

BANANAS AND PLANTAINS.—A great variety of nourishing drinks of vegetable origin are prepared by the Indians under consideration. Bananas are consumed largely in the shape of a pop, known locally by the name "w[illegible]bul." The bananas for this purpose are used generally in the green state, before their contained starch has turned into sugar. They are peeled and cooked in an iron pot. Then the water is poured off and the bananas are thoroughly mashed in the same pot with the aid of a short wooden stick. During this process cold water is added little by little, and the whole is well stirred. No salt

1: Conzemius M-4, 5 (1921) 1932
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●272 is added. Wabul is served generally between the meals; if a stranger arrives at an Indian village the women will immediately prepare some of this beverage for him. Rarely do they offer any to a white man unknown to them, as uneducated foreigners have at times refused with disdain the wabul offered to them. The drink is always served in calabashes, which are the drinking vessels of the Indians. Ripe bananas and plantains are also used occasionally in making wabul, but green plantains are too tough and hard to mash. If, instead of cold water, cow's milk or coconut milk is added to the fruit, the flavor is greatly improved, and the beverage is appreciated by the average foreigner.

The Sumu living on Rio Patuca are very fond of a beverage made from ripe bananas, which are cooked, mashed, and then allowed to remain for a day or two in a large earthen vessel, until this mass has turned sour. In case the bananas have been only half cooked the drink will be light yellow in color, and it is then known as *pihbra* (*pi* or *pih*, abbreviated from *pihni* "white"). If, on the other hand, the fruits are well cooked the resultant drink will turn dark red, and is then called *wakisa pûni* "red bananas." The Miskito name for either one of these two beverages is *pûnlaya* "red drink."

OIL PALM.—The fruits of the indigenous "hone" or oil palm (*Elaeis melanococca* Gaertn.), called *ohoñ* or *uhuñ* by the Indians, are boiled in order to liberate the red pulp surrounding the seeds. This pulp is then passed through a calabash pierced with holes like a collander and mixed with wabul. This is a most agreeable and nourishing drink, which is prepared only by the Miskito, for the oil palm does not grow inland in the region inhabited by the Sumu. It is the same palm from the seeds of which the Miskito prepare the well-known hair oil, called *batana* on the Mosquito Coast. The drink has been praised by Raveneau de Lussan[59] (438–439) and by M. W. (308), but neither of these two authors mentions it being consumed except together with wabul, as is the case with the Miskito of the lower Rio Coco at least. This beverage appears to be mentioned by Exquemelin (Engl. edit.: 251) under the name *achioc*.

MAIZE.—A number of nourishing drinks are prepared from maize. One of the most common is the one called "pinol" by the Ladinos (M.: *ayuñka;* S.: *am bokol, am tok*). The grain is toasted over a charcoal fire until it begins to "pop"; it is then ground on the metate and kept until needed. For use it is mixed with clear water and sweetened with sirup made from sugarcane, or with wild honey. The drink is cooling and refreshing, but as the maize is not finely ground, the dry particles occasion a tickling sensation in the throat.

On the upper Rio Coco and on Rio Bocay the Indians are very fond of another beverage (M.: *wasplu;* S.: *wasbol*) prepared from maize. The dry grains are ground and cooked afterwards; a small

[59] This author calls it *haon*.

1: Conzemius M-4, 5 (1921) 1932
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quantity of sprouted maize is then added, which imparts a slightly sweetish taste to the drink. It is consumed either fresh or after having been allowed to turn sour. 272

Atol (M.: *aya-makala;* S.: *kuri, am-tunun-ba, ama-tunani-ba*) is a very refreshing beverage which the average foreigner will appreciate. The young or green grains are cut off from the cob with a knife, after which they are passed through a sieve, and the drink is ready. It has great favor among the Ulwa especially. A similar beverage, but inferior in quality, is prepared from old maize; it is called *ulañ* by Miskito and Sumu. If the latter drink is allowed to turn sour it is known as *aya swahni* (M) "sour maize" and *dipis* (S).

Pozol (M.: *pusul;* S.: *sdûa*) is also consumed occasionally, and has apparently been introduced by the Ladinos. This drink is made from the "masa" or paste prepared by treating maize with lye and grinding it upon the metate. It is generally taken unsweetened.

Cacao.—An excellent food drink is prepared from cacao by the Sumu, especially by the Ulwa subtribe. The beans are roasted slightly over a charcoal fire and the outer integument is removed. They are then ground upon the metate together with a large quantity of toasted maize. For use about two teaspoonfuls of the powder and a little sirup are added to a calabash of water and the mixture is agitated for a few moments with the "molinillo." The resulting drink much resembles the chocolate of the Ladinos in consistency and taste, but it is of somewhat gritty character, due to the presence of the ground maize. Sometimes the drink is adulterated with the parched and ground kernels contained in the seeds of the scomphra palm, the pejivalle palm, or the zapote; it may also be flavored with vanilla and cinnamon. M. W. (308) observed this beverage among the Miskito and states that in those days it was sweetened with ripe plantains and wild honey.

Bunya or soured drinks.—These Indians are very fond of consuming vegetables in the shape of a beverage after they have been allowed to turn sour. This is especially the case with cassava, tania, sweetpotatoes, yams, and pejivalles. After being boiled in water, these foodstuffs are mashed; the resulting paste is then wrapped up carefully in large waterproof leaves, tied with rough withes or vegetable fibers, and attached to the rafters of the hut. Bijagua leaves are generally used for this purpose, as they are tougher and not as liable to split as banana or plantain leaves. Such food is known to the Miskito as *bunya*, and to the Sumu as *tapañ*; the Miskito of the interior, however, employ the Sumu name when the ingredients are not cassava. The Sumu also prepare maize in this manner; they cook it and then grind it upon a stone, so that it has the consistency of a thick paste.

Such soured food is always taken along on a journey. If the Indian wants to quench his thirst or hunger he stops at a running stream,

1: Conzemius M-4, 5 (1921) 1932
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272 places a handful of the thick paste in a calabash, and mixes it thoroughly with water. In the case of maize or pejivalles the thick skin is first squeezed out with the hands and thrown away.

INTOXICATING BEVERAGES

273 Bacchanalian orgies play an important part in the semireligious carousals and in the social life of the two tribes under consideration. Fortunately for themselves the Indians seldom have the means to buy spirits at the rum shops and their homemade drinks consume too much of their provisions to be indulged in frequently.

DISTILLING.—The Indians do not appear to have known how to distill, but before the arrival of the Europeans they knew how to get drunk on a number of fermented beverages. Aguardiente or rum (M.: *tahpla;* S.: *tapalni, tapalka,* lit.: "bitter") may be obtained by the Indians in the local shops. In Honduras and Nicaragua the manufacture of this spirit is a government monopoly, which is farmed out to contractors, generally political supporters of the party in power. There are many private illegal stills in the less accessible parts of these republics, which are operated chiefly by Ladinos. Levy (b: 300) states that the Ulwa of Rio Escondido distill an alcoholic liquor from cassava with the aid of an inform earthen still; the latter probably corresponds to the one depicted by Belt (233) from the neighborhood of Santo Domingo (Chontales) at the headwaters of Rio Escondido. I have met a similar simple apparatus among the Paya of Honduras. In these two cases, however, it served for the distilling of sugar-cane juice or brown sugar. Belt (233–234) describes such a "sly grog" manufactory as follows: "It consisted of two of the common earthenware pots of the country, one on the top of the other, the top one having had the bottom taken out and luted to the lower one with clay. This was put on a fire with the fermented liquor. The spirit condensed against the flat bottom of a tin dish that covered the top vessel, and into which cold water was poured, and fell in drops on to a board, that conducted it into a long wooden tube, from which it dropped directly into bottles."

FERMENTED DRINKS.—A great number of fermented drinks are prepared by these Indians. They are known locally by the general name mishla (M.: *misla;*[40] S.: *wasak*); distinctive names are, however, given

[40] This name (*michela, mishlaw, mushelaw*) appears to have been formerly restricted by the Miskito of Cabo Gracias a Dios to a beverage prepared from ripe bananas or plantains, either boiled or roasted (Exquemelin, French ed.: II, 268; Dampier: I, 314; M. W.: 307). Lionel Wafer (A new Voyage and Description of the Isthmus of Panama, London, 1699, pp. 154–155) gives the name *mislaw* for an unfermented beverage prepared from ripe plantains. None of these seventeenth century authors mention the use of cassava for this purpose, although they list it among the food plants of the Miskito.

2: Kirchhoff E-4 (no date) 1948
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Harpoons with floats attached are used for large fish and for manatees, the latter being taken in the lagoons and at sea. Harpoons with long retrieving lines but without floats are used for sea turtles. The *Sumo* lasso young crocodiles.

Domesticated animals.—No early source mentions dogs, but they are now common. Pigs, sheep, goats, cattle, horses, and cats have been introduced. The people tame a great variety of wild birds and several species of mammals. The latter are even suckled by the women. Species of native bees are kept in hives near the houses.

Food preparation.—Food may be boiled, sometimes in coconut milk. Meat and fish are broiled or roasted in hot ashes, and fish may be fried in coconut oil. The *Paya* fry green pineapple. Salt is used as a condiment but rarely as a preservative. Sauces of red peppers, lime, and salt are made by the *Mosquito*. The *Paya* use chili as a sauce or as a substitute for other food. Tamales are made of manioc. Maize dough, sometimes soured (*Mosquito*), is wrapped in leaves and baked. This and manioc dough may be made into tortillas, an item introduced into the region only in recent years. Manioc is made into bread, which is baked in the open fire.

Numerous beverages are made of liana sap, maize, honey, green plantains, and the like. Some of these are made of a sour paste, which is diluted with water before it is eaten. Such food is usually carried while traveling. Alcoholic beverages are prepared in canoes (*Mosquito*) or log troughs (*Paya*) and stored in earthenware pots. Fermentation is hastened in various ways, notably by chewing uncooked or cooked maize or manioc and spitting it into the mixture.

Preserving and storage of food.—Fish is dried in the sun and meat is dried on a three-legged babracot. The *Mosquito* make a mixture of green bananas and pejibaye palm nuts which may be kept for 6 months or longer. It can be made into a beverage or baked as bread. The *Sumo* preserve boiled maize by steeping it in lye to remove the hull and then burying it. The *Sumo* also make up large parcels of maize or peeled bananas, which are placed in running water until partially fermented, then dried in the sun. Live turtles are kept in stockades in shallow water.

VILLAGES AND HOUSES

Mosquito villages (pl. 35, *bottom*) had between 100 and 500 inhabitants. *Sumo* villages appear to have been much smaller. Formerly, communal houses, called "palenques," had compartments for each family. Some were about 40 by 80 feet (about 12.5 by 25 m.); smaller communal houses were built by the *Mosquito*. *Sumo* houses had an elaborately carved central post. House plans were rectangular, the ends being rounded, elliptical (*Paya*), or circular (*Mosquito* of Honduras). At the present

3: Pijoan D-5 (ca. 1945) 1946
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The most important fruit plant of the Miskito is the banana *(siksa)*. It is not indigenous to America but was brought by the Spaniards. The banana tree produces one good crop and the new shoots appearing at its base are transplanted for another crop. Of the great variety of bananas and plantains grown by the Indians the most common is the *Gros Michel*. Sweet cassava *(yauhra)* is the staple food for the coastal Miskito and it is also cultivated by those living inland. Eddoes or tanias *(duswa)* which are known also by the name "Coco", are cultivated for their edible tubers.

A semiwild yam and sweet potato *(tawa)* is eaten; pumpkins and squashes are also grown to some extent. Maize *(aya)* or Indian corn, which forms a staple food practically all over Central America, is sparsely and occasionally cultivated by the Miskito. When grown the corn is stored by hanging it under a roof over a low fire and smoked in order to prevent molding. Red or black beans *(snek)* are grown to a very small extent by the Miskito. Rice has been recently introduced. The grains of rice are heavy and rounded and differ from our native wild rice or those kinds ordinarily found in the tropics. The pejibaye *(supa)* is cultivated for its edible fruit; the Central American name for this plant appears to be taken from the Arawak language of Haiti. It is not a native plant in this area, so that it is found only in cultivated state and deserted palms indicate former village sites. The coconut palm *(kaya)* is found in a semiwild state. The Indians drink the juice of the nut, eat the tender kernel, and extract the oil. Oil is obtained by skimming the top of a boiling decoction of kernels and water.

Sugar cane *(kayu)* brought by the Spaniards during the sixteenth century is grown by the Miskito. They have a mill to extract the juice but have not learned to prepare sugar from it. They drink the fresh juice of the plant or allow it to ferment; sometimes it is boiled into a brown syrup which on cooling partially hardens to form a sort of brown sugar. Cacao which is indigenous, is sometimes cultivated but the pods are usually obtained from wild trees.

The most common native fruit trees are pineapples *(pihto)*, papaws or papayas *(twas)*, avocados or alligator pears *(sikya)*, soursops *(dwarsop)*, cashews *(kasan)* and plums *(ploms)*. The common fruit *(dwarsop)*, cashews *(kasan)* and plums *(ploms)*. The common fruit dock, grapefruit, mangoes, breadfruit, tamarind, and rose apples. A few bushes of cotton, chili peppers and annato are found near every lodge.